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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,460	04/29/2002	Juergen Lorenz	H 4136 PCT/US	4081
23377	7590	04/19/2004	EXAMINER	
WOODCOCK WASHBURN LLP ONE LIBERTY PLACE, 46TH FLOOR 1650 MARKET STREET PHILADELPHIA, PA 19103			BISSETT, MELANIE D	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b> 10/009,460	<b>Applicant(s)</b> LORENZ ET AL.	
	<b>Examiner</b> Melanie D. Bissett	<b>Art Unit</b> 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/01</u> . | 6) <input type="checkbox"/> Other: ____.  |

### ***Summary of the Claims***

1. Claim 14 is drawn to a thermoplastic composite comprising an amount of organic fibers and an amount of thermoplastic binder, where the binder is further defined. The claim specifies that the "binder does not consist solely of two different polyacrylates." It is the examiner's position to interpret this as excluding binder compositions consisting of two different polyacrylates; thus, a binder containing added binding materials would not be excluded. Claim 24 is drawn to a process for making a thermoplastic composite material. Claims 15-17 limit amounts of components, claims 18-19 limit the binder material composition, claims 21-23 limit the fiber composition, and claims 25-26 are drawn to laminate articles or processes. Claim 20 limits the composite to further comprise "up to 20% by weight" of an additive. The examiner interprets "up to 20%" as including zero; thus, the additives are optional.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 14-17 and 20-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Dorus Klebetechnik. Dorus Klebetechnik (WO 98/50617) can be found on the applicant's Form PTO-1449. For the purposes of this Office action, the examiner refers to the English language equivalent, US 6,482,875 B2.
4. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.
5. Dorus Klebetechnik teaches a thermoplastic composite material comprising at least 15% by weight of an organic fibrous material and at least 15% by weight of a thermoplastic binder, where the binder contains at least two different polyacrylates (abstract). Preferred fibers include leather fibers (col. 3 lines 26-31) having a stretched length of 0.1-15 mm (col. 3 lines 42-52). The binder may also contain additional thermoplastic binders, including polyolefins, polyamides, polyesters, and polyurethanes (col. 6 lines 44-59). Also, the reference teaches a particularly preferred embodiment including two polyacrylates, a third optional polyacrylate or copolymer, and additives (col. 7 line 63-col. 8 line 9). Thus, the reference teaches binders not consisting solely of two different polyacrylates. Additives including inorganic salts are used in amounts up to 15% by weight (col. 6 lines 50-58). A process teaches mixing the fibers and thermoplastic binder dispersion, treating the mixture with an inorganic copper or aluminum salt, draining the mixture, and drying the mixture (col. 8 lines 20-33). The reference teaches using hot melt adhesives to apply the films to a substrate (col. 10 lines 1-31). Regarding the amounts of fibrous material and binder present, the

reference teaches a range of 15% to more than 60% of fiber, where the most preferred range includes 45% by weight of fiber material (col. 3 line 53-col. 4 line 3). Binder materials are preferably present in amounts above 30% by weight (col. 6 lines 37-43). Since the reference teaches fibrous materials present in amounts as low as 15% by weight and teaches additives present in amounts up to 15% by weight, it is the examiner's position that the reference also suggests the balance of the composite as the binder. Thus, the reference suggests using at least 40% by weight of a binder.

6. Claims 14-17 and 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Ato Chimie. Ato Chimie (GB 2045829A) can be found on the applicant's Form PTO-1449.

7. Ato Chimie teaches a composite material comprising leather and reinforcing fibrous materials in a polymeric thermoplastic binder (abstract). Reinforcing fibers include organic fibrous materials, and binder materials include ethylene/vinyl acetate, polyolefins, polyamides, polyesters, polyacrylates, and vinyl polymers (p. 1 lines 66-93; 106-110). Leather fibers have lengths of 0.2-5 mm (p. 1 lines 61-65). The leather fibers are present in an amount of 30-80% by weight, while the reinforcing fibers are preferably present in amounts of 5-25% by weight (p. 2 lines 21-33). Thus, the combined organic fiber content is as low as 35% by weight, encompassing the applicant's claimed ranges. The binder material has an upper limit of 70% by weight, teaching the applicant's at least 40% by weight. The reference teaches the addition of

natural oils, coloring agents, and surfactants (p. 1 lines 119-124), where examples show the combined use of additives under 20% by weight.

8. Claims 14-17 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by K  chler et al.

9. K  chler teaches aqueous plastic dispersions of vinyl polymers and filler, where the filler comprises fibrous material (abstract). The binder material preferably comprises three vinyl polymers, where (c) is a homopolymer (col. 1 lines 43-58). Preferred materials for (c) include polyvinyl acetate (col. 3 lines 9-19). Preferred fibers include leather fibers (col. 3 lines 20-36). The reference teaches a process of adding fibers to a plastic dispersion, treating the dispersion with aluminum sulfate in an additive amount of 5-20% by weight, removing the water, and drying the mixture to form a sheet (col. 3 line 52-col. 4 line 13). Example 1 shows the mixing of 40 g leather fibers (15.8% by weight of solids) with 60 g of polyvinyl acetate (28% by weight of binder solids), where the total solid binder content is 213 g (84% by weight of solids).

10. Claims 14-17 and 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Worden.

11. Worden discloses waterlaid sheets containing an elastomeric binder, filler particles, and fibrous reinforcing materials for footwear applications (abstract). The composites comprise 5-50% by weight of a fibrous material and 15-80% by weight of a binder (col. 2 lines 7-14). Elastomeric latex materials include polyurethanes, neoprene,

and copolymers of butadiene with acrylonitrile or styrene (col. 5 lines 6-13). Fibrous materials include leather fibers having lengths of 0.1-4 mm (col. 6 lines 56-65). The mixture of elastomeric dispersion and fiber is treated with a flocculating agent including aluminum sulfate (col. 10 lines 53-66), pressed, and dried (col. 11 lines 15-32). Examples show mixtures having the applicant's claimed binder and fiber content (example 3) and the applicant's claimed additive content (example 15).

12. Claims 14, 16, and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Addie as evidenced by Williams et al.

13. Addie discloses a reconstituted leather product comprising leather fibers, synthetic fibers, and a resin (abstract). Fibers used in the invention have various lengths; in one example, 50-60% of the leather fibers have lengths of about 0.25 in (6.35 mm), 25% have lengths of 0.125-0.25 in (3.175-6.35 mm), and 25% have lengths greater than 0.25 in (col. 4 lines 1-18). Thus, the reference teaches using fibers having lengths of 0.1-15 mm. The synthetic fibers used in the invention serve as binding agents (col. 6 lines 31-38) and include thermoplastic polyesters, polyamides, acetates, and polyolefins (col. 6 lines 39-50). Resins to be used in the invention include thermoplastic Vector styrene copolymers by Dexco (col. 7 lines 21-49). Williams teaches that the Vector copolymers cited by Addie are styrene-butadiene block copolymers (col. 4 lines 37-43). Example 2 shows a leather product having 17% by weight of styrene-butadiene resin, 60% by weight of leather fibers, and 24% by weight of thermoplastic fibers. Thus, the example demonstrates a composite comprising at

least 10% by weight of styrene-butadiene copolymer and at least 40% by weight of thermoplastic binder. Regarding the additives, the reference teaches including small amounts of wax coloring agents (col. 8 lines 45-50).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over K  chler et al.

16. K  chler applies as above, failing to exemplify the use of a binder composition comprising at least 30% by weight of polyvinyl acetate. However, the reference does prefer polyvinyl acetate as the homopolymer and suggests a broad range of homopolymer content (col. 1 lines 43-58). Since the sheets of the invention are shown to have improved vibration-damping properties, it is the examiner's position that it would have been prima facie obvious to use at least 30% by weight of polyvinyl acetate in the binder composition to form a composite sheet having equally improved vibration-damping properties.

17. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Addie as evidenced by Williams et al.



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18. Addie and Williams apply as above, failing to exemplify the use of 15-45% by weight of organic fibrous material. However, the reference teaches a broad range of fiber content (col. 9 lines 25-33). Specifically, the fiber compositions preferably comprise at least 50% of leather fibers. If the leather fibers of example 2 were set to compose 50% of the fiber content (10 lbs), the leather fibers would compose 37% by weight of the total solids of the composition. The leather sheets of the invention are known to have improved appearance and physical properties (col. 2 lines 4-13). It is the examiner's position that it would have been prima facie obvious to use 15-45% by weight of the leather fibers to obtain a leather sheet having equally improved physical and appearance properties.

19. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Küchler et al. in view of Addie.

20. Küchler applies as above, teaching the general claimed composition and method but failing to teach the leather fiber lengths. Addie discloses leather product materials, where leather fibers having lengths of about 0.05-0.75 in (1.27-19 mm) are used. Addie teaches that the fiber length is important to optimize processing and cohesion (col. 3 lines 43-55). Thus, it is the examiner's position that it would have been prima facie obvious to employ leather fibers having the claimed lengths in Küchler's invention to optimize cohesion and processing of the composites.

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21. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Addie in view of Toyota.

22. Addie applies as above for the making of leather products, failing to mention the use of hot-melt films to form leather laminates. Toyota teaches a method of bonding leather to a backing material via a hot-melt adhesive to form seating articles having improved mechanical strength (abstract). The molten adhesive would inherently form a film between the two outer layers. It is the examiner's position that it would have been prima facie obvious to use Toyota's article-forming method to form leather articles having improved appearance while having improved mechanical strength.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdb



James J. Seidleck  
Supervisory Patent Examiner  
Technology Center 1700